

Delete the SPECIFICATION as filed and insert the SUBSTITUTE SPECIFICATION filed by separate document.

IN THE CLAIMS:

Page 9, line 1, amend as follows:

Therefore it is claimed:

Delete Claims 1-9 and insert new claims 10-20 as follows:

~~10. A method of controlling a biaxial wheel test stand for simulating driving loads, the test stand including a load unit having a servo-hydraulic vertical load cylinder for adjusting a vertical force, a servo-hydraulic load cylinder for adjusting a horizontal force, and a pivot head which can be adjusted by means of a camber cylinder about a head pivot point for adjusting the magnitude of a camber angle of a wheel to be tested, the test stand further including a drive unit with a driven drum having starting rings, the wheel to be tested being pressed against the starting rings pressed with the load unit, whereby the vertical load cylinder and the horizontal load cylinder are adjusted by controlling the force and the camber cylinder by controlling the angle, said method including the steps of adjusting the horizontal force, the vertical force and the camber angle based on the wheel radial force and the wheel side force previously determined during a road test, and using the position of a point of application of a resulting force of the wheel radial force and the wheel side force as the control magnitude for the camber angle.~~

11. The method of controlling according to claim 10 further including the step of measuring the force of the camber cylinder and using the measured camber force as the control magnitude for determining the point of the application of the resulting force.

12. The method of controlling according to claim 11 wherein the point of application of the resulting force is spaced a distance from the wheel center.

13. The method of controlling according to claim 12 further including the step of calculating the resulting force distance of the point of application of the resulting force by means of the equation

$$R_{DS} = (M_{Fs} + Fa \times R_{dyn}) / Fr - a1$$

wherein

M_{Fs} : the moment of the camber cylinder force around the head pivot point;

Fa : the axial wheel side force from the road test;

Fr : the wheel radial force from the road test;

R_{dyn} : the dynamic roll radius; and,

$a1$: a distance between the head pivot point and the tire center.

14. The method of controlling according to claim 13 further including the step of adjusting the vertical force, the horizontal force and the camber angle by means of a control or

evaluation unit, until an unambiguous solution for the equations is reached

$$R_{DS} = (M_{Fs} + Fa \times R_{dyn}) / Fr - a1;$$

$$Fv = - Fr \times \cos(\gamma) + Fa \times \sin(\gamma) \text{ and}$$

$$Fh = - Fr \times \sin(\gamma) - Fa \times \cos(\gamma)$$

wherein

R_{DS} : the resulting force distance;

M_{Fs} : the moment of the camber cylinder force around the head pivot point;

Fa : the axial wheel side force from the road test;

R_{dyn} : the dynamic roll radius;

Fr : the wheel radial force from the road test;

$a1$: the distance between the head pivot point and the tire center;

Fv : the vertical force; and,

Fh : the horizontal force.

15. The method of controlling according to claim 14 further including the step of approximating the position of the resulting force application point by setting the resulting force distance to zero.

16. The method of controlling according to claim 10 further including the step of calculating the resulting force distance of the point of application of the resulting force by means

of the equation

$$R_{DS} = (M_{Fs} + Fa \times R_{dyn}) / Fr - a1$$

wherein

M_{Fs} : the moment of the camber cylinder force around the head pivot point;

Fa : the axial wheel side force from the road test;

Fr : the wheel radial force from the road test;

R_{dyn} : the dynamic roll radius; and,

$a1$: a distance between the head pivot point and the tire center;

17. The method of controlling according to claim 10 further including the step of adjusting the vertical force, the horizontal force and the camber angle by means of a control or evaluation unit, until an unambiguous solution for the equations is reached

$$R_{DS} = (M_{Fs} + Fa \times R_{dyn}) / Fr - a1;$$

$$Fv = - Fr \times \cos(\gamma) + Fa \times \sin(\gamma) \text{ and}$$

$$Fh = - Fr \times \sin(\gamma) - Fa \times \cos(\gamma)$$

wherein

R_{DS} : the resulting force distance;

M_{Fs} : the moment of the camber cylinder force around the head pivot point;

Fa : the axial wheel side force from the road test;

R_{dyn} : the dynamic roll radius;

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Fr: the wheel radial force from the road test;
a1: the distance between the head pivot point and the tire center;
Fv: the vertical force; and,
Fh: the horizontal force.

18. The method of controlling according to claim 10 further including the step of approximating the position of the resulting force application point by setting the resulting force distance to zero.

19. A wheel test stand for simulating driving loads on a vehicle wheel, said test stand comprising a load unit having a servo-hydraulic vertical load cylinder for adjusting a vertical force on the wheel, a servo-hydraulic horizontal load cylinder for adjusting a horizontal force on the wheel, and a pivot head which can be adjusted by means of a servo-hydraulic camber cylinder for adjusting the camber angle of the wheel; a drive unit having a driven drum with starting rings, to which the wheel can be pressed by means of the load unit; a control and evaluation unit for adjusting the horizontal force, the vertical force and the camber angle; and a measuring unit connected to the camber cylinder which measures a camber cylinder force acting on the camber cylinder.

20. The wheel test stand according to claim 19, wherein the measuring device consists

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of a capsule-type dynamometer connected to the camber cylinder.
